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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/645,373	08/21/2003	Craig D. Tipton	3202R	7486

26645 7590 11/18/2005

THE LUBRIZOL CORPORATION
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EXAMINER

COSTALES, SHRUTI S

ART UNIT	PAPER NUMBER
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1714

DATE MAILED: 11/18/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/645,373

Applicant(s)

TIPTON ET AL.

Examiner

Shruti S. Costales

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 8/21/03, 1/18/05, 8/31/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statements submitted on August 21, 2003, January 18, 2005, and August 31, 2005 were filed in compliance with the provisions of 37 CFR § 1.97. Accordingly, the information disclosure statements filed by the applicant have been considered by the Examiner.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1, 2, 6, 7, 10-16, and 20 are rejected under 35 U.S.C. 102(b) as being anticipated by Toukan et al. (U.S. Patent Number 4,618,438), which was cited by the applicant on the PTO-1449 submitted on January 18, 2005.

Toukan discloses an oil soluble lubricant additive having a stable reaction product of 3,5-dimercapto-1,3,4-thiadiazole, a succinimide, phosphoric acid, and a boron containing compound (Col. 1, lines 35-68 and Col. 2, lines 1-18; Example 2; and Claims 19-20). The reaction product is obtained by heating the components together at a temperature of about 125° to 175° C for 1 to 4 hours (Col. 2, lines 3-18). The reaction product includes the additive in an amount of 1% to 10% by weight and a major amount of a lubricating oil (Col. 2, lines 3-18) such as synthetic or natural oil of vegetable or

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petroleum origin (Col. 3, lines 5-9). Heating of the components to obtain the reaction product occurs in the presence of the major amount of lubricating oil (see Examples). The thiadiazole has 8-15 carbons (Col. 2, lines 63-68). It is to be noted that Toukan's succinimide is inherently a dispersant because, "from the standpoint of patent law, a compound and all its properties are inseparable," *In re Papesch*, 315 F.2d 381, 391, 137 USPQ 43, 51 (CCPA 1963). Moreover, where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, *In re Best*, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977), and further "when the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not," *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). In fact, "products of identical chemical composition can not have mutually exclusive properties," and a chemical composition and its properties are inseparable. *In re Spada*, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990).

In light of the above discussion, it is clear that the presently cited claims are anticipated.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ward, Jr. et al. (U.S. Patent Number 6,251,840), which was cited by the applicant on the PTO-1449 submitted on August 21, 2003, in view of Toukan et al. (U.S. Patent Number 4,618,438), which was cited by the applicant on the PTO-1449 submitted on January 18, 2005.

Ward discloses a lubricating/functional fluid composition with improved anitwear, antifoaming and low temperature viscosity properties, wherein the composition includes an oil of lubricating viscosity (Col. 2, lines 2-8). The composition also includes 2,5-dimercapto-1,3,4-thiadiazole (Col. 2, lines 9-13), a borated compound and a phosphorous compound (Col. 2, lines 14-26). The 2,5-dimercapto-1,3,4-thiadiazole is present in an amount of 0.025 – 5 weight percent based on the weight of the lubricating composition (Col. 4, lines 38-43). The composition also includes succinimide dispersants, carboxylic ester dispersants, Mannich dispersants in an amount of up to 10 weight percent (Col. 8, lines 1-67 and Col. 9, lines 1-42). Further, Ward's composition includes a boron compound in an amount of 0.1 to 10 weight percent (Col. 7, lines 8-16), wherein the boron compound includes boric acid (Col. 7, lines 17-30). Ward also discloses adding at least one phosphorous acid, phosphorous acid salt, phosphorous acid ester or derivative thereof in an amount of 0.002 – 1.0 weight percent (Col. 14, lines 15-51). The lubricating oil is present in an amount greater than 50 weight percent (Col. 2, lines 47-52). Further, it is disclosed that the lubricating composition is effective as crankcase lubricating oils for internal combustion engines and automatic transmission fluids (Col. 2, lines 30-52).

The difference between Ward and the presently claimed invention is the requirement that the components are heated together at a specified temperature for a specified period of time.

Toukan discloses an oil soluble lubricant additive having a stable reaction product of 3,5-dimercapto-1,3,4-thiadiazole, a succinimide, phosphoric acid, and a

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boron containing compound (Col. 1, lines 35-68 and Col. 2, lines 1-18; Example 2; and Claims 19-20). The reaction product is obtained by heating the components together at a temperature of about 125° to 175° C for 1 to 4 hours (Col. 2, lines 3-18). The reaction product includes the additive in an amount of 1% to 10% by weight and a major amount of a lubricating oil (Col. 2, lines 3-18) such as synthetic or natural oil of vegetable or petroleum origin (Col. 3, lines 5-9). Heating of the components to obtain the reaction product occurs in the presence of the major amount of lubricating oil (see Examples). The thiadiazole has 8-15 carbons (Col. 2, lines 63-68). It would have been obvious to one of ordinary skill in the art to combine Ward's composition components by heating as described by Toukan because the resulting composition provides enhanced results in certain applications (Col. 1, lines 7-11), thereby obtaining the invention as set forth in the presently cited claims.

Conclusion

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shruti S. Costales whose telephone number is (571) 272-8389. The examiner can normally be reached on Monday - Friday, 6:30 AM - 3:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on (571) 272-1119. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at (866) 217-9197 (toll-free).

SSC
Shruti S. Costales
November 14, 2005

Vasu Jagannathan
VASU JAGANNATHAN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700